SITE INSPECTION WORKSHEETS

This appendix consists of worksheets that can be used to generate an SI site score. Completion of these worksheets is not required, but the SI investigator must evaluate an SI score, either by these worksheets, PREscore, or other Regional scoring tools.

The worksheets consist of instructions and data tables to be filled in with scores from HRS reference tables. The data tables may also call for Data Type and References.

DATA TYPES: The Data Type columns should be filled in with and **H, Q** or **+** if the data are HRS quality and well documented. The Data Type column should be filled in with an **E, X** or **-** if the data represent estimates, approximations, or are not fully documented. This type identifies data gaps for the expanded SI to investigate.

REFERENCES: The Reference columns should be filled in with coded reference numbers. The numbered reference list should be attached or the numbering should be cross-referenced to the SI Narrative Report.

The SI investigator will need the current Superfund Chemical Data Matrix (SCDM) OSWER Directive 9345.1-13 (revised semi-annually) to complete these worksheets.

THIS PAGE IS INTENTIONALLY LEFT BLANK

SITE INSPECTION WORKSHEETS

CERCLIS IDENTIFICATION NUMBER
MSD000693176

SITE LOCATION			
SITE NAME: LEGAL, COMMON, OR DESCRIPTIVE NAME OF SITE **Enterprise Recovery Systems**			
STREET ADDRESS, ROUTE, OR SPECIFIC LOCATION IDENTIFIER Route 5, Box 287			
CITY Byhalia	STATE Mississippi	ZIP CODE 38611	TELEPHONE
COORDINATES: LATITUDE AND LONGITUDE 34° 59' 07" N and 89° 37' 03" W		TOWNSHIP, RANGE, AND SECTION	

OWNER/OPERATOR IDENTIFICATION					
OWNER (Previous) Enterprise Recovery Systems, Inc. Mr. Robert Thompson, Owner			OPERATOR (Current) Mr. Ronald Maxwell		
OWNER ADDRESS P.O. Box 550			OPERATOR ADDRESS		
CITY Clarksdale			CITY Clarksdale		
STATE Mississippi	ZIP CODE 38611	TELEPHONE	STATE Mississippi	ZIP CODE 38611	TELEPHONE

SITE EVALUATION		
AGENCY/ORGANZATION T N & Assoc., Inc. for Region 4 EPA Superfund Technical Assessment Response Team (START)		
INVESTIGATOR Keely Meadows		
CONTACT Greg Kowalski		
ADDRESS 1220 Kennestone Circle, Suite D		
CITY Marietta	STATE Georgia	ZIP CODE 30066
TELEPHONE (678) 355-5550	SUBMITTED February 2006	

References: 1, Weston FRA, 1990 PA, 1991 SSI

GENERAL INFORMATION

Site Description and Operational History: Provide a brief description of the site and its operational history. State the site name, owner, operator type of facility and operations, size of property, active or inactive status, and years of waste generations. Summarize waste treatment, storage, or disposal activities that have or may have occurred at the site; note whether these activities are documented or alleged. Identify all source types and prior spills, floods, or fires. Summarize highlights of the PA and other investigations. Cite references.

Ortega Farms Dump (Ortega) is located in the west-central portion of Duval County, Florida, at 6200 Block Ortega Farms Boulevard (Refs. 1, 2). The geographic coordinates are 30° 13' 59" north latitude and 81° 42' 43" west longitude (see Figure 1) (Refs. 1, 3). Jacksonville Naval Air Station is located approximately 1 mile east of the site, across the Ortega River. The 10 acre site is bounded on the east by the Ortega River, on the west by Ortega Farms Boulevard, on the south by a line which could be considered an eastern extension of 118th Street, and on the north by a line which could be considered the eastern extension of Pennant Avenue (Ref. 4). Wetlands exist in the southern part of the site, and four canals run west/east on the eastern portion the site (Ref. 1).

Ortega was previously used by the City of Jacksonville during the 1960s until 1970 for demolition debris and municipal garbage (Refs. 5, 6). The trash reportedly consisted of concrete and steel from the demolition of a large bridge, automobile tires, refrigerators, trees, etc (Ref. 5). The site was not known to have received any hazardous waste nor was it connected with any active Resource Conservation and Recovery Act (RCRA) regulated facility (Ref. 6).

Residential housing and heavily vegetated open areas now occupy the former Ortega dump site (see Figure 2) (Ref. 7). The site is divided into approximately 24 parcels, owned by various residents (Ref. 8). Fishing docks are present on the eastern portion of the site in the Ortega River. Four canals are located within the boundaries of the site. South of the North canal is an overgrown area reported to be the original location of the landfill (see Figure 3). Site access is unrestricted.

On September 6, 1985, a PA was conducted by EPA and NUS Corporation (NUS) (Ref. 2). It was noted that several nearby residents on the east side of Ortega Farms Boulevard have private drinking water wells. The site was observed with several canals flowing into the Ortega River approximately 100 yards to the east.

In October 1985, a Site Screening Investigation (SSI) was performed by EPA and NUS (Ref. 5). During the SSI, 40 samples were collected, including surface soil, surface water, sediment, and private well samples (Ref. 17). Groundwater samples revealed that all metals concentrations "were at or near concentrations expected for area groundwater" (Ref. 5, p. 2). Only one groundwater sample contained unidentified extractable organic compounds, at a total estimated concentration of 300 micrograms per liter (µg/L). With the exception of manganese detected at concentrations ranging from 31 µg/L to 89 µg/L, surface water sampling revealed all metals were below detection limits. Cyanide was detected in 8 of the 13 surface water samples. Concentrations in 7 of the samples ranged from 12 to 23 µg/L. The concentration of cyanide in J21-17W was 200 µg/L. Soil and sediment sampling revealed elevated concentrations of cyanide, lead, barium, vanadium, and copper in several locations on the Ortega River, specifically in the downstream ends of the canals immediately adjacent to the river or in marshy areas immediately adjacent to the river (Ref. 5, p. 3).

In December 1986, a Groundwater Quality Survey was performed by the Florida Department of Health and Rehabilitative Services (Ref. 18). Five residential wells were sampled and analyzed for cadmium, chromium, lead, sulfates, chlorides, total dissolved solids, and volatile organic compounds (VOCs). In all samples, cadmium, chromium, and lead were not detected above the reporting limit of 1.0 µg/L. Sulfates ranged from 4.08 milligrams per liter (mg/L) to 42.1 mg/L. Chlorides ranged from 8.86 mg/L to 10.6 mg/L, and total dissolved solids ranged from 240 mg/L to 259 mg/L. VOCs were not detected in any sample.

In November 1995, Black & Veatch Waste Science, Inc. (B&V) conducted a Site Investigation Prioritization (SIP) at Ortega, collecting eight soil (four surface, four subsurface), six private well, and five sediment samples at Ortega (Ref. 19). The report details findings of this investigation.

GENERAL INFORMATION (continued)

SITE SKETCH: Provide a sketch of the site. Indicate the pertinent features of the site and nearby environments including sources of wastes, areas of visible and buried wastes, buildings, residences, access roads, parking areas, fences, fields, drainage patterns, water bodies, vegetation, wells, sensitive environments, and other features.

GENERAL INFORMATION (continued)

Source Descriptions: Describe all sources at the site. Identify source type and relate to waste disposal operations. Provide source dimensions and the best available waste quantity information. Describe the condition of sources and all containment structures. Cite references.

SOURCE TYPES

Landfill: A man-made (by excavation or construction) or natural hole in the ground into which wastes have come to be disposed by backfilling, or by contemporaneous soil deposition with waste disposal.

Surface Impoundment: A natural topographic depression, man-made excavation, or diked area, primarily formed from earthen materials (lined or unlined) and designed to hold an accumulation of liquid wastes, wastes containing free liquids, or sludges not backfilled or otherwise covered; depression may be wet with exposed liquid or dry if deposited liquid has evaporated, volatilized or leached; structures that may be described as lagoon, pond, aeration pit, settling point, tailings point, sludge pit; also a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled).

Drum: A potable container designed to hold a standard 55-gallon volume of wastes.

Tank and Non-Drum Container: Any device, other than a drum, designed to contain an accumulation of waste that provides structural and its constructed primarily of fabricated materials (such as wood, concrete, steel, or plastic); any portable or mobile device in which waste is stored or otherwise handled.

Contaminated Soil: An area or volume of soil onto which hazardous substances have been spilled, spread, disposed, or deposited.

Pile: Any non-containerized accumulation above the ground surface of solid, non-flowing waste; includes open dumps. Some types of waste piles are:

- Chemical Waste Pile: A pile consisting primarily of discarded chemical products, by-products, radioactive wastes, or used or unused feedstocks.
- Scrap Metal or Junk Pile: A pile consisting primarily of scrap metal or discarded durable goods (such as appliances, automobiles, auto parts, batteries, etc.) composed of materials containing hazardous substances.
- Tailing pile: A pile consisting primarily of any combination of overburden from a mining operation and tailings from a mineral mining, benenficiation, or processing operation.
- Trash Pile: A pile consisting primarily of paper, garbage, or discarded non-durable goods containing hazardous substances.

Land Treatment: Landfarming or other method of waste management in which liquid wastes or sludges are spread over land and tilled, or liquids are injected at shallow depths into soils.

Other: Sources not in categories listed above.

GENERAL INFORMATION (continued)

Source Description: Include description of containment per pathway for groundwater (see HRS Table 3-2), surface water (see HRS Table 4-2), and air (see HRS Tables 6-3 and 6-9).

The sources identified at Red Panther include contaminated soils and on-site tank contents. Since the Phase I and Phase II Removal Actions conducted from 2002 through 2005 could not be considered a "qualified removal" (the SI was conducted prior to the removal), sources on site prior to the removal were considered for HRS scoring purposes.

The site is approximately 6.5 acres. Due to numerous buildings on site, the estimated amount of contaminated soil on site prior to the Removal Action is approximately 3.25 acres of contaminated soil.

The Phase II Removal Report documents 8 above-ground storage tanks present on site (size ranging from 200 gallons to 15,000 gallons). The manifests document 150,000 pounds of arsenic-contaminated sludge in Tanks 1, 2, 3, 5, 6, and 7. Tanks 4 and 8 were documented to contain 83,000 pounds of arsenic and pesticide-contaminated sludge. The total estimated tank contents of hazardous arsenic and pesticide sludge is 233,000 pounds.

Major source contaminants are as follows:

Arsenic
Dieldrin
Toxaphene
Endrin
4,4'-DDT
4,4'-DDE
4,4'-DDD
Heptachlor
Heptachlor epoxide
Alpha-Chlordane
Methoxychlor
Gamma-Chlordane
Gamma-BHC
Endosulfan II

Hazardous Waste Quantity (HWQ) Calculation: SI Tables 1 and 2 (See HRS Tables 2-5, 2-6, and 5-2). (Show calculation for soil exposure pathway, if divisor is different):

Tier B
(Hazardous Wastestream Quantity): 233,000 lbs. of contaminated tank contents / 5,000 = **46.6**

Tier D (Area): 3.25 acres of contaminated soil source / 0.78 = **4.17**

Site Waste Quantity: 46.6 + 4.17 = 50.77 = **HWQ Score = 1**

HWQ = 1

References: 1, 1991 SSI, Phase I RA, Soil Char, Phase II SSR, Weston FRA

SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MUTLIPLE SOURCE SITES

		Single Source Sites (assigned HWQ scores)	
(Column 1) TIER	(Column 2) Source Type	(Column 3) HWQ = 10	(Column 4) HWQ = 100
A Hazardous Constituent Quantity	N/A	HWQ = 1 if Hazardous Constituent Quantity data are complete HWQ = 10 if Hazardous Constituent Quantity data are not complete	> 100 to 10,000 lbs
B Hazardous Wastestream Quantity	N/A	≤ 500,000 lbs	>500,000 to 50 million lbs
C Volume	Landfill	≤ 6.75 million ft^3 ≤ 250,000 yd^3	>6.75 million to 675 million ft^3 >250,000 to 25 million yd^3
	Surface impoundment	≤6,750 ft^3 ≤ 250 yd^3	>6,750 to 675,000 ft^3 >250 to 250,000 yd^3
	Drums	≤ 1,000 drums	>1,000 to 100,000 drums
	Tanks and non-drum containers	≤50,000 gallons	>50,000 to 5 million gallonsft^3
	Contaminated soil	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million to 675 million >250,000 to 25 million yd^3
	Pile	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3
	Other	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3
D Area	Landfill	≤340,000 ft^2 ≤ 7.8 acres	>340,000 to 34 million ft^2 >7.8 to 780 acres
	Surface impoundment	≤1,300 ft^2 ≤ 0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres
	Contaminated Soil	≤ 3.4 million ft^2 ≤ 78 acres	>3.4 million to 340 million ft^2 >78 to 7,800 acres
	Pile	≤ 1,300 ft^2 ≤ 0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres
	Land Treatment	≤ 27,000 ft^2 ≤0.62 acres	>27,000 to 2.7 million ft^2 >0.62 to 62 acres

TABLE 1 (continued)

Single Source Sites (assigned HWQ scores)		Multiple Source Sites		
(Column 5) HWQ = 10,000	**(Column 6) HWQ = 1,000,000**	**(Column 7) Divisors for Assigning Source WQ Values**	**(Column 2) Source Type**	**(Column 1) TIER**
>10,000 to 1 million lbs	>1 million lbs	Lbs / 1	N/A	**A Hazardous Constituent Quantity**
>50 million to 5 billion lbs	>5 billion lbs	**Lbs / 5,000**	N/A	**B Hazardous Wastestream Quantity**
>6.75 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	> 6.75 billion ft^3 > 2.5 billion yd^3	ft^3 / 67,500 yd^3 / 2,500	Landfill	**C Volume**
>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 / 67.5 yd^3 / 2.5	Surface impoundment	
>100,000 to 10 million drums	> 10 million drums	drums / 10	Drums	
>5 million to 500 million gallons	> 500 million gallons	gallons / 500	Tanks and non-drum containers	
>675 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	>6.75 billion ft^3 >2.5 billion yd^3	ft^3 / 67,500 yd^3 / 2,500	Contaminated soil	
>675,000 to 67.5 billion ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 / 67.5 yd^3 / 2.5	Pile	
>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	>67.5 million ft^3 >2.5 million yd^3	ft^3 / 67.5 yd^3 / 2.5	Other	
>34 million to 3.4 billion ft^2 >780 to 78,000 acres	>3.4 billion ft^2 > 78,000 acres	ft^2 / 3,400 acres / 0.078	Landfill	**D Area**
>130,000 to 13 million ft^2 >2.9 to 290 acres	>13 million ft^2 > 290 acres	ft^2 / 13 acres / 0.00029	Surface impoundment	
>340 million to 34 billion ft^2 >7,800 to 780,000 acres	> 3.4 billion ft^2 > 780,000 acres	ft^2 / 34,000 **acres / 0.78**	Contaminated Soil	
>130,000 to 13 million ft^2 >2.9 to 290 acres	> 13 million ft^2 > 290 acres	ft^2 / 13 acres / 0.00029	Pile	
>2.7 million to 270 million ft^2 >62 to 6,200 acres	> 270 million ft^2 > 6,200 acres	ft^2 / 270 acres / 0.0062	Land Treatment	

HAZARDOUS WASTE QUANTITY (HWQ) CALCULATION

For each migration pathway, evaluate HWQ associated with sources that are available (i.e., incompletely contained) to migrate to the pathway. (Note: If Actual Contamination Targets exist for ground water, surface water, or air migration pathways, assign the calculated HWQ score of 100, whichever is greater, as the HWQ score for the pathway.) For each source, evaluate HWQ for one or more of the four tiers SI Table 1, HRS Table 2-5) for which data exist: constituent quantity, wastestream quantity, source volume, and source area. Select the tier that gives the highest value as the source HWQ. Select the source volume HWQ rather than source area HWQ if data for both tiers are available.

Column 1 of SI Table 1 indicates the quantity tier. Column 2 lists source types for the four tiers. Columns 3, 4, 5 and 6 provide ranges of waste amount for sites with only one source corresponding to HWQ scores at the tops of the columns. Column 7 provides formulas to obtain source waste quantity values at sites with multiple sources.

1. Identify each source type.
2. Examine all waste quantity data available for each source. Record constituent quantity and waste stream mass or volume. Record dimensions of each source.
3. Convert source measurements to appropriate units for each tier to be evaluated.
4. For each source use the formulas in the last column of SI Table 1 to determine the waste quantity value for each tier that can be evaluated. Use the waste quantity value obtained from the highest tier as the quantity value for the source.
5. Sum the values assigned to each source to determine the total site waste quantity.
6. Assign HWQ score from SI Table 2 (HRS Table 2-6).

Note these exceptions to evaluate soil exposure pathway HWQ (see HRS Table 5-2):

- The divisor for the area (square feet) of a landfill is 34,000.
- The divisor for the area (square feet) of a pile is 34.
- Wet surface impoundments and tanks and non-drum containers are the only sources for which volume measurements are evaluated for the soil exposure pathway.

SI TABLE 2: HWQ SCORES FOR SITES

Site WQ Total	HWQ Score
0	0
1[a] to 100	1[b]
>100 to 10,000	100
>10,000 to 1 million	10,000
>1 million	1,000,000

[a] If the WQ total is between 0 and 1, round it to 1.
[b] If the hazardous constituent quantity data are not complete, assign the score of 10.

Manually Insert the Excel file SI Table 3,
Page C-11 here.

Ground Water Observed Release Substances Summary Table

On SI Table 4, list the hazardous substances associated with the site detected in ground water samples for that aquifer. Include only those substances directly observed or with concentrations significantly greater than background levels. Obtain toxicity values from the Superfund Chemical Data Matrix (SCDM). Assign mobility a value of 1 for all observed release substances regardless of the aquifer being evaluated. For each substance, multiply the toxicity by the mobility to obtain the toxicity/mobility factor value; enter the highest toxicity/mobility value for the aquifer in the space provided.

Ground Water Actual Contamination Targets Summary Table

If there is an observed release at a drinking water well, enter each hazardous substance meeting the requirements for an observed release by well and sample ID on SI Table 5 and record the detected concentration. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference does equals or exceeds 100%, evaluate the population using the well as a Level I target. If these percentages are less than 100% or all are N/A, evaluate the population using the well as a Level II target for that aquifer.

SI TABLE 4: GROUND WATER OBSERVED RELEASE SUBSTANCE (BY AQUIFER)

Sample ID	Hazardous Substance	Sample Concentration µg/L	Background Concentration µg/L	Federal MCL µg/L	Toxicity/ Mobility	References
				Highest Toxicity/Mobility		

SI TABLE 5: GROUND WATER ACTUAL CONTAMINATION TARGETS

Well ID: _____ Level I_____ Level II_____ Population Served_____ References

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RfD	% of RfD
			Highest Percent		Sum of Percents		Sum of Percents	

GROUND WATER PATHWAY
GROUND WATER USE DESCRIPTION

Describe Ground Water Use within 4 miles of the Site:
Describe generalized stratigraphy, aquifers, municipal and private wells.

The groundwater migration pathway is of potential concern at Red Panther because all drinking water in the study area comes from groundwater sources. According to MDEQ, a major municipal drinking water supplier in the area is the City of Clarksdale, which operates 10 wells ranging from approximately 600–1,300 feet deep (Ref. Wells). Eight of the wells draw water from the Sparta Aquifer, and two wells draw water from the Meridian-Upper Wilcox Aquifer. The City of Clarksdale wells have 7,353 connections, serving a total population of 20,809, resulting in an average population per well of 2,081. Clarksdale Public Utilities maintains one well, located within 4-miles from Red Panther (Refs. 1, Wells). The well draws water from the Meridian-Upper Wilcox Aquifer. The well has 10,432 connections, serving a total population of 29,523. The Town of Lyon maintains one well within 2=3 miles from site. The well also draws water from the Meridian-Upper Wilcox Aquifer. The well has 183 connections, serving a population of 518 people. Mississippi's wells have designated Wellhead Protection Areas (Ref. Wells).

Private wells exist within a 4-mile radius of Red Panther (Refs. 1, Wells). Two documented private wells in the area draw water from the Meridian-Upper Wilcox Aquifer at depths of 1,140 feet and 1,252 feet. Only one of these wells lies within 4-miles of the site. The private well population was calculated by multiplying the total number of houses served by private wells within each radial ring by 2.83, the average number of people per household (Ref. Census). Two other documented private wells in the area draw waster from the Sparta Aquifer (Ref. Wells). However, both wells are located just outside the 4-mile radius of the site. Six additional private wells draw water from the Mississippi River Valley Alluvial Aquifer; however, considering them would affect neither the groundwater pathway nor the overall site score (Ref. Wells).

Numerous irrigation wells were documented to exist within 4-miles of Red Panther (Ref. Wells). These wells draw water from the Mississippi River Valley Alluvial Aquifer at approximately 94–164 feet.

The table below lists the municipal and private wells within 4 miles of Red Panther for the Meridian-Upper Wilcox Aquifer. This aquifer is the primary concern due to the high population served. The table illustrates the apportioned populations associated with each well and the total populations identified within each radial ring (Refs. 1, Census, Wells).

Show Calculations of Ground Water Drinking Water Populations for each Aquifer:

Provide apportionment calculations for blended supply systems.
County average number of persons per household: 2.83 References: 1, Census, Wells

Meridian-Upper Wilcox Aquifer

Distance / Radius Ring	Municipal Wellfields	No. of Active Wells	Population per Well[a]	Population per Wellfield	Private Well Population[b]	Total Population Served per Radial Distance
0–0.25 Mile	City of Clarksdale	1	2,081	2,081	–	2,081
0.25-0.5 Mile	–	–	–	–	–	–
0.5-1 Mile	–	–	–	–	–	–
1–2 Miles	Clarksdale Public Utilities	1	29,523	29,523	–	29,523
2–3 Miles	City of Clarksdale Town of Lyon	1 1	2,081 518	2,081 518	–	2,599
3–4 Miles	–	–	–	–	2.83	2.83

Notes: [a] Population per well was calculated by dividing the total number of people served by the wellfield by the number of wells.
[b] Private well population was calculated by multiplying the total number of houses served by private wells within each radial ring by 2.83, the average number of people per household.
– No municipal or private wells present

GROUND WATER PATHWAY WORKSHEET

MERIDIAN-UPPER WILCOX AQUIFER

LIKELIHOOD OF RELEASE	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation support a release to the aquifer, assign a score of 550. Record observed release substances on SI Table 4.			
2. POTENTIAL TO RELEASE: Depth to aquifer: +1,000 ft. bgs If sampling data do not support a release to the aquifer, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Optionally, evaluate potential to release according the HRS Section 3.	340		1, 18th Street 1991 SSI, Phase I RA, Phase II SSR
LR=	**340**		

TARGETS			
Are any wells part of a blended system? Yes X No ____ (See page C-14 for apportionment)			
3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any target drinking water well for the aquifer has been exposed to a hazardous substance from the site, evaluate the factor score for the number of people served (SI Table 5). Level I: _____people x 10 = _____ Level II:_____people x 1 = _____ **Total =**			
4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water wells for the aquifer or overlying aquifers that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 6a or 6b. Sum the population values and multiply by 0.1.	478.43		1, Wells, Census
5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets for the aquifer or overlying aquifer. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking water wells exist within 4 miles, assign 0.	20		1, Wells, Census
6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA for the aquifer, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles, otherwise assign 0.	5		1, Wells, Census
7. RESOURCES: Assign a score of 5 if one or more ground water resource applies; assign 0 if none applies. • Irrigation of commercial food crops or commercial forage crops (5 acre minimum) • Watering of commercial livestock • Ingredient in commercial food preparation • Supply for commercial aquaculture • Supply for a major or designated water recreation area, excluding drinking water use	5		1, Wells
SUM OF TARGETS T=	**508.43**		

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUNDWATER TARGET POPULATIONS

MERIDIAN-UPPER WILCOX AQUIFER

SI TABLE 6a: OTHER THAN KARST AQUIFERS

Distance from site	Pop.	Nearest well (choose highest)	Population Served by Wells within Distance Category												
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000	Pop. Value	Ref.
0 to 1/4 mile	2,081	20	4	17	53	164	522	**1,633**	5,214	16,325	52,137	163,246	521,360	1,632,455	1,633	1; Well; Census
>1/4 to 1/2 mile	0	18	2	11	33	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122	0	1; Well; Census
>1/2 to 1 mile	0	9	1	5	17	52	167	523	1,669	5,224	16,684	52,239	166,835	522,385	0	1; Well; Census
> 1 to 2 miles	29,523	5	0.7	3	10	30	94	294	939	**2,939**	9,385	29,384	93,845	293,842	2,939	1; Well; Census
>2 to 3 miles	2,599	3	0.5	2	7	21	68	**212**	678	2,122	6,778	21,222	67,777	212,219	212	1; Well; Census
>3 to 4 miles	2.83	2	**0.3**	1	4	13	42	131	417	1,306	4,171	13,060	41,709	130,596	0.3	1; Well; Census
Nearest Well =		**20**												**SUM =**	**4,784.3**	

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUND WATER TARGET POPULATIONS (continued)

SI TABLE 6B: KARST AQUIFERS

Distance from site	Pop.	Nearest well (choose highest)	Population Served by Wells within Distance Category												Pop. Value	Ref.
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000		
0 to 1/4 mile		20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455		
>1/4 to 1/2 mile		20	2	11	33	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122		
>1/2 to 1 mile		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
> 1 to 2 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
>2 to 3 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
>3 to 4 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,523	260,680	816,227		
Nearest Well =														**SUM =**		

GROUND WATER PATHWAY WORKSHEET (concluded)

WASTE CHARACTERISTICS	Score	Data Type	Does Not Apply
8. If any Actual Contamination Targets exist for the aquifer or overlying aquifers, assign the calculated hazardous waste quantity (HWQ) score or a score of 100, whichever is greater; if no Actual Contamination Targets exist, assign the hazardous waste quantity score calculated for sources available to migrate to ground water.	1		
9. Assign the highest ground water toxicity/mobility value from SI Table 3 or Table 4.	10,000		
10. Multiply the ground water toxicity/mobility and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below: (from HRS Table 2-7) 1 x 10,000 = 10,000	10		
WC =	**10**		

Product	WC Score
0	0
>0 to < 10	1
10 to < 100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to < 1E + 05	**10**
1E + 05 to < 1E + 06	18
1E + 06 to < 1E + 07	32
1E + 07 to < 1E + 08	56
1E + 08 or greater	100

Multiply LR by T and by WC. Divide the product by 82,500 to obtain the ground water pathway score for each aquifer. Select the highest aquifer score. If the pathway score is greater than 100, assign 100.

GROUND WATER PATHWAY SCORE: $\frac{\text{LR X T X WC}}{\text{82,500}}$

LR = 340
T = 508.43
WC = 10

$$\frac{340 \times 508.43 \times 10}{82{,}500}$$

$$\frac{1{,}728{,}662}{82{,}500}$$

21.0

(Maximum of 100)

21.0